

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

KIKUCHI et al.

Application No.: New US Patent Application

Filed: November 21, 2001

Attorney Dkt. No.: 108426-00010

For: AN AUTO-CRUISE APPARATUS

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

November 21, 2001

Sir:

Prior to initial examination of the application, please amend the above-identified application as follows:

IN THE CLAIMS:

Please amend claims 11, 12 and 13 as follows:

11. (Amended) An auto-cruise apparatus as claimed in any one of claims 1, 2, 7, 8 or 9, wherein said set vehicle speed is set to a current vehicle speed when said vehicle-to-vehicle distance control mode is switched to said constant vehicle speed mode.

12. (Amended) An auto-cruise apparatus as claimed in any one of claims 1, 2, 7, 8 or 9, further comprising preceding vehicle determination means for determining a preceding vehicle that said subject vehicle should follow,

wherein a switching from said vehicle-to-vehicle distance control mode to said constant vehicle speed mode by said mode selector is allowed only when said preceding vehicle determination means determines that there exists no preceding vehicle.

13. (Amended) An auto-cruise apparatus as claimed in any one of claims 1, 2, 7, 8 or 9, wherein said set vehicle speed that has been already set is reset when a switching from said vehicle-to-vehicle distance control mode to said constant vehicle speed mode is performed.

REMARKS

Claims 1-20 are pending in this application. By this Amendment, claims 11, 12, and 13 are amended to delete multiple dependency. No new matter is contained in the amendments.

Please charge any fee deficiency or credit any overpayment to Deposit Account No. 01-2300.

Respectfully submitted,



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response to such operation upon said vehicle-to-vehicle distance setting means that increases said vehicle-to-vehicle distance and is performed for a predetermined time period or more when the subject vehicle is in said vehicle-to-vehicle distance control mode.

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9. An auto-cruise apparatus as claimed in claim 8,

wherein said vehicle-to-vehicle distance setting means is capable of setting said vehicle-to-vehicle distance to at least a long, middle or short distance; and

wherein said mode selector performs a switching from said vehicle-to-vehicle distance control mode to said constant vehicle speed control mode in response to such operation upon said vehicle-to-vehicle distance setting means that increases said vehicle-to-vehicle distance and is performed for a predetermined time period or more when said vehicle-to-vehicle distance is set to long.

10. An auto-cruise apparatus as claimed in any one of claims 7 through 9,

wherein said input means further comprises a cruise switch for switching between a control state in which a vehicle-to-vehicle distance control by said vehicle-to-vehicle distance controller or a constant vehicle speed control by said constant vehicle speed controller is performed and a non-control state in which both said vehicle-to-vehicle distance control and said constant vehicle speed control are disabled; and

wherein said set vehicle-to-vehicle distance is set to middle when said non-control state is switched to said vehicle-to-vehicle distance control mode.

11. An auto-cruise apparatus as claimed in any one of claims ^{1, 2, 7, 8 or 9} 1 to 10

wherein said set vehicle speed is set to a current vehicle speed when said vehicle-to-vehicle distance control mode is switched to said constant vehicle speed mode.

- 5 12. An auto-cruise apparatus as claimed in any one of claims ^{1, 2, 7, 8 or 9} 1 through 10, further comprising preceding vehicle determination means for determining a preceding vehicle that said subject vehicle should follow,

10 wherein a switching from said vehicle-to-vehicle distance control mode to said constant vehicle speed mode by said mode selector is allowed only when said preceding vehicle determination means determines that there exists no preceding vehicle.

13. An auto-cruise apparatus as claimed in any one of claims ^{1, 2, 7, 8 or 9} 1 through 10, wherein said set vehicle speed that has been already set is reset when a switching from said vehicle-to-vehicle distance control mode to said constant vehicle speed mode is performed.

14. A method for switching a mode of an auto-cruise apparatus, said auto-cruise apparatus comprising a vehicle-to-vehicle distance controller for
20 controlling a vehicle speed of a subject vehicle with a set vehicle speed as an upper limit of said vehicle speed such that a vehicle-to-vehicle distance between said subject vehicle and a preceding vehicle becomes equal to a set vehicle-to-vehicle distance and controlling said vehicle speed such that said vehicle speed becomes equal to said set vehicle speed when it is determined
25 that there exists no preceding vehicle and input means capable of being operated by a driver with regard to a vehicle-to-vehicle distance control performed by said vehicle-to-vehicle distance controller wherein said set vehicle-to-vehicle distance and said set vehicle speed can be set by said